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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,547	11/05/2003	Hirokazu Takemiya	Q78266	6082
23373	7590	04/07/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			PECHHOLD, ALEXANDRA K	
			ART UNIT	PAPER NUMBER
			3671	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/700,547	Applicant(s) TAKEMIYA, HIROKAZU	
	Examiner Alexandra K Pechhold	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 9, 10, and 11 are objected to because of the following informalities:
 - in claim 9, line 2, it is unclear what exactly the applicant is referencing to in disclose "at least one pair of lines"; also the applicant recites "the horizontal cross-sectional shapes" which are not previously set forth;
 - claim 10 seems to contradict claim 1, since claim 10 recites that the hard layer and ground have the same stiffness and claim 1 recites that they are different;
 - claim 11 recites "the lower layer" which was not previously set forth so it is unclear exactly what applicant is referring to; lines 3-4 of the claim where it states "mixed laid underground" appears to be missing some words and is unclear.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-12 are rejected under 35 U.S.C. 103(a) as being**

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unpatentable over Shinohara (JP 05124843) in view of Toschi (EP 0819661 A2).

Regarding claim 1, Shinohara discloses a method of reducing ground vibrations, wherein a hard member having higher stiffness than the surround ground is seen as plate member (4), and a rubber elastic member is seen as cushioning material (3) formed of an elastic body (see English abstract), thereby forming a hard layer and an elastic layer. Shinohara fails to specifically disclose that the elastic material (3) is rubber in the abstract. Toschi teaches the use of tire chips in damping structures as diaphragm walls or foundations, for example for roads, railroads, and the like (see abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the elastic cushioning material in Shinohara to comprise rubber as taught by Toschi, since rubber is a commonly available as Toschi states in column 1, lines 44-48.

Regarding claim 2, it is unclear if Shinohara discloses the material of plate shaped shell member (4), though it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the material of the member (4) in Shinohara to be concrete or an iron material, since these are such commonly used, structural and cost efficient materials.

Regarding claims 3 and 4, Shinohara illustrates the use of columns cylindrical in section in Figs. 5-7.

Regarding claim 5, Shinohara fails to disclose the use of scrap tires or pulverized scrap tire material. Toschi teaches the use of recycled scrap tires in

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damping structures as diaphragm walls or foundations, for example for roads, railroads, and the like (see abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the elastic cushioning material in Shinohara to comprise scrap tires as taught by Toschi, since Toschi states in column 3, lines 22-29 that recycling permits avoidance of a corresponding consumption of valuable materials like rubber, and also allows for a low production cost.

Regarding claims 6, 7, and 8, Shinohara fails to disclose the recited honeycomb or square shape or triangular shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shape of the units of Shinohara to comprise honeycomb, square, or triangular since such aesthetic designs are well within the skill of one designing the layers.

Regarding claim 9, Shinohara discloses parallel columns in Fig. 5.

Regarding claim 10, the alternating layers are viewed in Shinohara as the multiple columns in Fig. 5, which thereby result in alternating layers of hard material and elastic material.

Regarding claim 11, Shinohara illustrates the elastic member laid underground in Figs. 5 and 7.

Regarding claim 12, Shinohara discloses an elevated structure, referred to as structure (1), also seen in the figures, Fig. 5 specifically illustrating that directly underneath the structure (1) is surrounded with the hard and elastic layers.

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Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexandra Pechhold whose telephone number is (703) 305-0870. The examiner can normally be reached on Mon-Thurs. from 8:00am to 5:30pm and alternating Fridays from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (703)308-3870. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.


Thomas B. Will
Supervisory Patent Examiner
Group 3600

AKP
4/4/04